

## DEMAND FOR TRUCKS CONSTANTLY GROWING

Reo Company Enlarging Plant  
to Take Care of Coming  
Business.

"The motor truck business has grown by leaps and bounds during the last year and it seems as if at last this branch of the automobile industry, to the development of which we have all looked forward, is finally coming into its own," says R. C. Hueschaw, sales manager of the Reo Motor Truck Company.

"We ship more motor trucks in a week now than we used to ship in a year and still the orders come faster than we can make the trucks."

Mr. Hueschaw took occasion to deny that the Reo Company had a war order for trucks.

"We are not looking for business from these countries at this time," he said. "We feel that good business policy dictates that we take care of our home trade before going after the other and with our present factory facilities we find it absolutely impossible to catch up with the domestic demand for motor trucks. Undoubtedly the European demand worked beneficially for the truck business in two ways."

"In the first place it enabled many manufacturers to go into the truck business on a larger scale than ever before and the performance of American trucks in Europe demonstrated as nothing else could their sturdiness and reliability."

"Embodied by that accomplishment American business houses which had been hesitating for a long time about discarding the slow expensive horse equipment and installing motor trucks finally made the plunge. It is interesting to note that even the largest houses usually go into



R. C. HUESCHAW.

the business gingerly, buying one or two at first and after carefully trying them out, ordering a whole fleet of them.

"To meet this overwhelming demand we have under construction and now al-

## DEVELOPMENT OF THE ALL YEAR CAR TOLD

Winter and Summer Type, In-  
vented by Kissel, No  
Longer a Novelty.

By GEORGE A. KISSEL.

The most successful inventions are those that combine in a simple and convenient way something useful, attractive and economical. The all year car is one of this class of inventions and on account of the warmth with which the public has accepted the idea it has been suggested that the details of its origin and development would be interesting at this time.

At the 1914 automobile shows the Kis-



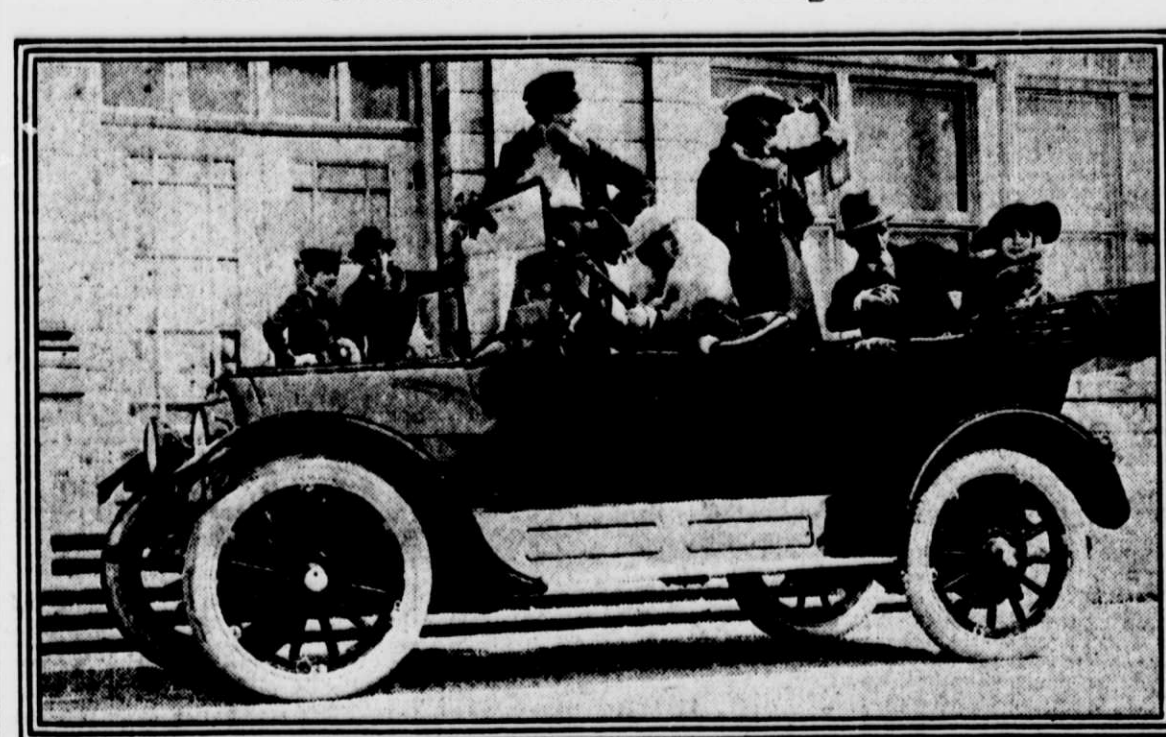
GEORGE A. KISSEL.

sel Motor Car Company presented as a novelty—not as standard—a new style of touring body, which had two entrance doors and a divided front seat with a corridor between. This model not only was a subject of much interest and comment, but a great many orders were received for this design that it was decided to adopt it as standard. It was introduced as such in May, 1914. That was the germ of the all year car idea.

Two doors and a divided front seat, an opportunity to perfect a two in one car, a car that would be a high grade closed coach in winter and a stylish touring car in summer. For two months our body engineers labored at nothing else. There were obstacles to overcome. Many plans were rejected. It must be a thorough job, something that looked just as good and served as completely in its winter form as in its summer form. It was determined that the only way to build this model was to construct the two halves as one. This we did. The top is not a mere lid; it is part of the original job, removable at the owner's will.

The public announcement of the all

This Is Overland's Model 83B, a Big Little Car



## BOOM PREDICTED BY AUTO MANUFACTURERS

Foreign and Domestic Demands Will Be Bigger Than  
Ever, Says Toback.

By S. S. TOBACK.

A. Elliott Ranney Company.

The automobile has solved many problems. The growth of the industry during the last year has been beyond expectations. The future no one can predict. Automobile manufacturers have laid their plans for the coming year on huge production figures.

The motor car occupies a unique position in the mechanical locomotion family to-day because it largely counteracts the ill effects that followed the introduction of other forms of transportation. No one now regards the motor car as a mere fad. The world knows it has fulfilled its mission. It is a real necessity for comfort, health and business progress. With millions of American made automobiles for this country, the expectation that the foreign demands the coming year will be greater than ever in the automobile industry is counted upon as ad-

## EFFICIENCY OF EIGHTS PROVED BY THE COLE

Last Year of Cross-Country  
Travel Gave This Car  
a Severe Test.

By C. P. HENDERSON.

General Sales Manager Cole Motor Car Company.

A little more than a year ago the Cole Motor Car Company, after months of research, decided to produce an eight cylinder car. It was a novelty to begin with, an innovation, but it had been produced according to the precepts of standardization, and when it was placed before the public it was accepted with the assurance that it must have been right or it could not have withstood the rigors of a year of cross-country travel.

A year of excellent performance is now written into the history of the multi-cylinder motor car and it has definitely proved its right to be called the car of the future.

The last summer, with its torrid rains in many sections, has come to be looked upon as one of the worst seasons for touring that we have had in this country in years, yet there were more motor cars out on the road than ever in the history of the country. The American tourist was forced to stay at home because of the untoward conditions existing in Europe. Trips across the continent were many. Every nook and cranny of the land was explored. And out of it all the multi-cylinder car with its wonderful standards unexcelled in point of achievement.

Cars of this type have mounted easily to the crests of hills and climbed the long, steep grades of mountain passes and valleys. The fact that they have been able to reach, and the multi-cylinder car can usually take them on high. No more striking example of the efficiency of the multi-cylinder car has recently been had than through the performance of the cars of this type which took part in the recent inaugural tour over the proposed Dixie Highway between Chicago and Miami, Fla., on which the Cole eight acted as the official pilot car. Reed L. Parker, the automobile expert, who made the long trip, said:

"If there is any doubt resting in the minds of the motor buying public concerning the efficacy of the eight cylinder motor car, it was removed because I personally saw two of the multi-cylinder cars negotiate mountain roads that two years ago would not have been passable to any kind of a motor car. The cars referred to are a Cole and a Cadillac. There never was a miss in either engine. In fact, both cars showed wonderful ability to run over any kind of roads throughout the trip of the Dixie Highway commissioners."

Harold W. Slauson, head of the Motor Department of Leslie's Weekly, has said a fine tribute to the Cole eight. After a trial trip in one of the Cole eight cylinder cars with Capt. Harry Stratton, Mr. Slauson said:

"Although we tried the steepest hills to be found in New York, some of them with a start of not more than six or seven miles an hour, there was not one on which the car did not increase its speed during the heaviest part of the ascent and with all of its power there was the wonderful control that would enable the car to pull well over a rough road at a speed which I tested to be considerably slower than the average man walks."

## HEADS OF HUPP PLANT WHO CAUSED SUCCESS

J. W. and J. R. Drake and Ed-  
win Denby Were Founders  
of Company.

As a man is known by the company

he keeps, so is an automobile judged by the factory in which it is produced and the men behind the factory. In the case of the Hupmobile, that car was conceived, started and developed by the same three men who to-day are the controlling factors and directing forces of the Hupmobile Motor Car Corporation.

Few factories have been more fortunate than the Hupmobile in retaining the same men in the direction of their destinies. President J. Walter Drake, Secretary Joseph R. Drake and Treasurer Edwin Denby have directed the affairs of the company since its inception and it is largely due to the harmonious work of this trio that the Hupmobile has achieved its success.

J. Walter Drake and Edwin Denby were law partners when they conceived the idea of putting a high grade automobile on the market at a low price. They figured that there would be a big demand for a low and medium priced car with high grade materials. So the Hupmobile was produced and Drake left the law practice. He has been the directing genius ever since and the company has now grown from a \$25,000 company in 1908 to the present big corporation with its \$8,000,000 capitalization, and an annual output of from 20,000 to 25,000 cars. There are three factories, one at Detroit, a Canadian branch across the river at Windsor and a parts plant at Jackson, Mich.

Besides being president and the directing head of the Hupmobile Mr. Drake is also director in several other Detroit manufacturing concerns. He is noted for his philanthropy and is especially interested in bettering the conditions not only of his workmen but of the communities in which his plants are located. He has equipped a playground near his Detroit plant for the use of the children of the neighborhood. He opened a clubhouse next to the factory for the benefit of employees.

Mr. Denby is also prominent in Detroit life and is director of several banks and concerns and is one of the principal stockholders in the Denby truck. He is widely known in political circles and served several terms in Congress.

Joseph R. Drake takes care of the export business of the concern. Mr. Drake has made two trips around the world in Hupmobiles and it was because of these trips and because of the performance of the car that the Hupmobile secured its excellent foreign representation.

New Definition of an Eight.

Here is an eight cylinder definition credited to Edgar Apperson: "The eight gives you four power impulses for every revolution of the flywheel, an impulse every quarter turn. The turning effort is practically constant. The eight is the ideal power plant."

Adopt New Spring Suspension.

Long, heavy, semi-elliptic rear springs are a new construction feature incorporated in the four cylinder Empire model. This is the manner of rear spring construction which has been employed by some of the highest priced cars and coupled with long wheelbase makes the new Empire four an exceptionally easy riding car.

## OWEN MAGNETIC CAR IS EASILY CONTROLLED

General Electric Company  
Gets Interest and Will Build  
Transmissions.

E. S. Partridge, sales manager of the Owen magnetic car, whose original ideas and selling methods are largely responsible for the place the car with the electric transmission now occupies in the public mind, in discussing the future prospects of this car said:

"This is the one car in the Palace Automobile Show which no visitor can afford to overlook. It is not only the distinct novelty of the show, but it also represents the ideal motor car which designers have been striving for since the inception of the automobile industry. In other words, the Owen magnetic car answers the popular demand for flexibility and a control so simple that even a child can understand how to operate the car."

"The car embodies simplicity of construction without adding additional parts, because the generator and motor employed in our transmission are the same units found on any gasoline car to-day, but are simply a little larger and are arranged in a slightly different manner on the chassis."

"A man who purchases an Owen magnetic car is not buying an experiment, but a tried and true mechanical principle. The General Electric Company after thorough tests recently purchased a substantial interest in the patents covering this transmission and in the future will build all of the transmissions used not only in the Owen magnetic cars, but will also supply the demand that will be made upon them by other manufacturers that are to adopt this system."

"The Baker R. & L. Company of Cleveland are also part of the combination and the facilities of their huge Cleveland plants will be directed to the manufacture of the Owen magnetic car. The chassis they will build at their Baker plant, while the bodies will be constructed at the factory of the Rauch & Lang Company, who are famous for high grade coach and body work."

"It is indeed gratifying to me," said Mr. Partridge, "that I can now look forward to a production in 1916 that will nearer meet the demand for this wonderful car that makes the motorist's dream come true."



W. F. PFEIFFER,  
Miller Rubber Company.

## BUICK CONTENTS SIXES ARE SMOOTH ENOUGH

Yields Maximum of Liquid  
Power Without Mechan-  
ical Sacrifices.

By R. H. COLLINS.

General Sales Manager Buick Motor Company.

If the advantage of the six cylinder motor had to be defined in one word, that word would be "balance." Makers of six cylinder motors contend that this type of power plant yields the maximum of smooth power that can be obtained without the necessity for more or less costly mechanical sacrifices.

Theoretically of course the smooth-



R. H. COLLINS.

ness of the power developed by a motor increases as the cylinders are increased in number. Makers of sixes contend, however, that beyond a certain point this extra smoothness of power has no significance to the average motorist. They argue that for all practical purposes the six cylinder motor supplies power that is smooth enough to be defined as practically liquid in its flow.

The Buick Motor Company of Flint, the world's largest manufacturers of six cylinder motors, received thousands of inquiries after their "sixes exclusively" announcement, asking why their output would be confined to that one type. The Buick company contends that in the present stage of engineering development to go beyond six cylinders would involve a mechanical complexity and expense which would not be warranted by the advantages gained.

The Buick company also takes the position that the six is the logical motor from the standpoint of public favor as well as the standpoint of mechanical efficiency. Since the announcement that all Buicks would be six cylinder models the company has been swamped with a demand for its product.

Buick six cylinder motors are built with the valves directly in the top of the cylinders—hence the name "valve-in-head"—so that on the exhaust stroke the dead gases, in order to get out travel in a straight line. In other types of motors this is not true. The great cooling surface of the cylinder walls upon which the Buick Motor Company lays the greatest stress, is correctness of design. The valve-in-head motor is absolutely correct in principle.

Speedometer in Line of Vision.

If there is any single gauge or meter which it would seem should be easily and quickly read it is the speedometer. An example of the care exercised in this direction is seen in the Cadillac. The speed indicator is set in the instrument board directly in line with the driver's vision.

## BEAUTY IS ESSENTIAL OF LOW PRICED CARS

Designers Will Have to Give  
Owners Grace as Well  
as Power.

"I've often wondered," said Benjamin Briscoe the other day, "when the great American public that buys popular priced cars was going to rise up and demand good looks as a first essential of satisfaction. And I venture to say that the time is here and that the big sellers in the popular priced field in 1916 will be the cars with grace and distinction to recommend them as well as mechanical efficiency."

"It is a curious fact in the history of nearly all manufacturing that appearance was the last thing considered, unless the article was a high priced one. That has been true of everything from shoes to ships, from aeroplanes to automobiles. And there's no real reason for it except that the inventors, the engineers and the mechanical men have hated everything to their end of the game—and everything else was afterwards."

The result in the automobile field has been that the owner of a popular priced car has seldom had any well developed pride of possession. Yet beauty is not a matter of dollars and cents. The cottage may, and often does, excite more admiration and envy than the mansion.

"I have come to the conclusion that it is time for the engineers to get closer to the rest of the organization—not to take a back seat, but to sit in the same box with the fellows to whom a beautiful car is just as important as a mechanically perfect one. Instead of building the chassis and giving the body design little more attention than that of the gas tank let's start even and design body and chassis as one harmonious whole."

"In other words, let the public buy



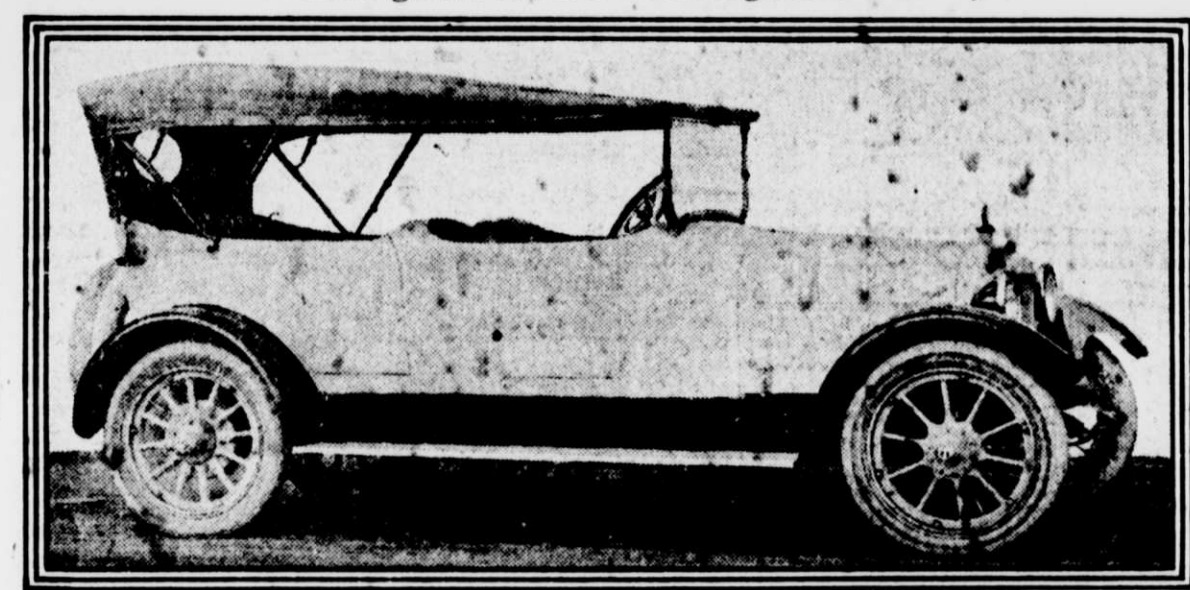
BENJAMIN BRISCOE.

the car. The time has gone by when motor cars were a sacred mystery known only to the few. So let the public that buys them and uses them dictate what should go into them. And above all let's produce cars that the buyer can really be proud of. We've all met the man who is continually on the defensive about his car—there are thousands of him.

"Yet he's a type that the manufacturers themselves have created; and the way to abolish him is to give him a car that not only is good, but looks good—a car that tells its own class without the aid of a nameplate."

"That has always been the policy of the Briscoe organization; and now that we make every part of our cars in our own plants it will be even more closely followed."

## Lexington-Howard Thoroughbred Six



most completed what will be, I think, the largest truck factory in this country. It occupies four and a half acres of ground. Already we are wondering whether even this big addition to our plants will enable us to catch up with the domestic demand, so you see we are not out after foreign business."

## USE HELPS THIS MOTOR.

Knight Engineered Cars Go Better  
the Further They Run.

The feature of the Willys-Knight motor which shows most prominently in comparison with the conventional poppet valve type is the seemingly contradictory fact that the longer it is used the better it becomes. It is also claimed that this motor will develop greater power than any poppet valve motor of the same bore and stroke.

"It is certainly true that the ordinary gasoline motor becomes less efficient with long use," states John N. Willys, builder of the Willys-Knight and second largest automobile manufacturer in the world. "But, as is pointed out at the Overland booth at Grand Central Palace, in the Knight type motor there is no vulnerable part to wear out and become noisy like the valves in the mushroom type."

"In the Knight type motor such troubles have been eliminated by removing the cause. The use of sleeve valves means a motor that under all circumstances is absolutely reliable. Retiming is never necessary. There are no valves to be ground, to warp and lose compression. There is no guesswork. The entire action is positive and never failing. The motor is quiet, yet it was not designed for silence, and while its quietness is distinctive its greatest features are reliability, increased power, smoothness, flexibility, lack of repairs and adjustments, economy and long life."

"There are thousands of Knight engines in use all over the world and car owners have found them to give even better service the second and third years than the first."



ORLANDO F. WEBER,  
Maxwell Motor Co.

year car was made in the middle of August, 1914, in both the newspapers and magazines. How it was received is best indicated in the fact that in New York city alone more than 250 inquiries were recorded in the first six days following the publication of the advertisement. Throughout the 1914-15 season the demand for it was so great that we could not supply one-third of the actual orders received. There was no other manufacturer building anything of the kind, but all acknowledged that it was the best motor car of its class ever made. That they were sincere is best proved by the fact that more than a score of them are featuring some sort of a detachable top this season. Visitors to the show will have the opportunity to compare the many ways in which the idea has been carried out.

Just as in the case of the invention itself, a successful name is usually the most simple name. The all year car was among many suggested ones, but seemed immediately to have the merits of brevity, catchiness and to carry the most apt possible description of the product. We established this trade name by using it constantly in our advertising, our object being to identify as well as describe this model of KisselKar.

Motorcycles Use Goodyears.

The Goodyear Tire & Rubber Co. of Akron, O., not only produces the largest number of automobile tires, but is also the leader in the motorcycle tire field. Three of every four motorcycles in the United States start their careers on Goodyear Blue Streak Tires. This year's production of motorcycles will be about 60,000—45,000 of these will start eating up gas and spark on Blue Streak Tires.

John N. Could Run a Railroad.

There are over five miles of railroad tracks on the Willys-Overland Company's property in Toledo. This does not include tracks on railway property adjoining.

Drive Chains Are Adjustable.

A new feature which appears in cam shaft drive chains are obtained in the new eight cylinder King, they being adjustable.



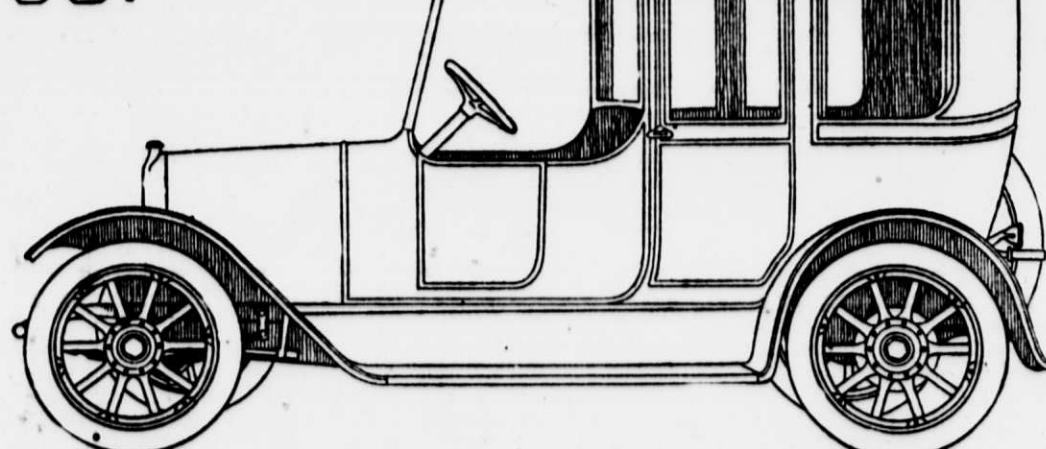
TERMS TO SUIT.

FORD COMMERCIAL BODIES FOR FURNACE, JINNY, Express and other purposes.

All types of Panel Bodies with the "Dixie Extension" which gives you from 10 to 50-inch loading space behind driving seat.

HAYES-DIFFENDERFER CO.  
"Too long a name to be forgotten."  
225 West 56th Street.

SGV



## The Best America Affords in Motor Car Construction

The S G V Chassis and body features are acknowledged to be in a class by themselves. Our new 35-H. P. Engine, 3 7/8 x 6, with aluminum pistons and other superior features, must be seen to be appreciated.

THE S G V CO., 500 Central Avenue, Newark, N. J. Telephone 3117

COME TO THE SHOW AND ALLOW US THE PRIVILEGE TO DEMONSTRATE CONCLUSIVELY Space C-6.

## Pierce-Arrow Cars

The new models known as Series IV, to be shown at the Palace Auto Show and also at the New York and Newark salesrooms, are evolutionary rather than revolutionary.

A very complete exhibit will be made. Two entirely new models are the low, rakish four-passenger car, and the Convertible car, with open and enclosed tops.

HARROLD'S MOTOR  
CAR CO.  
233-239 W. 54th St.  
New York, N. Y.

ELLIS MOTOR  
CAR CO.  
416 Central Ave.  
Newark, N. J.

